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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/799,680	03/15/2004	Ingemar Hessman	024445-459	8654

21839 7590 10/04/2005

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EXAMINER
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ADDISU, SARA

ART UNIT	PAPER NUMBER
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3722

DATE MAILED: 10/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/799,680	<b>Applicant(s)</b> HESSMAN ET AL.	
	<b>Examiner</b> Sara Addisu	<b>Art Unit</b> 3722	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 23 June 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) 1-15, 22 and 31 is/are allowed.
- 6) ☒ Claim(s) 16, 24-30 and 32 is/are rejected.
- 7) ☐ Claim(s) 17-21 and 23 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 August 2004 and 23 June 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>6/23/05</u>   | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

The previous rejection of claim 19 under 35 USC 112 2<sup>nd</sup> paragraph is withdrawn due to Applicant's amendment filed 6/23/05.

### ***Response to Arguments***

Applicant's arguments (of the amended claim 16), see page 1, lines 10-16, filed 6/23/05, with respect to the rejection(s) of claim(s) 16-29 under 103 (a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of newly found prior art reference.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. Claims 20 (line 5), 21 (line 3) and 23 (line 2) recites the limitation "the edge part".

There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 102***

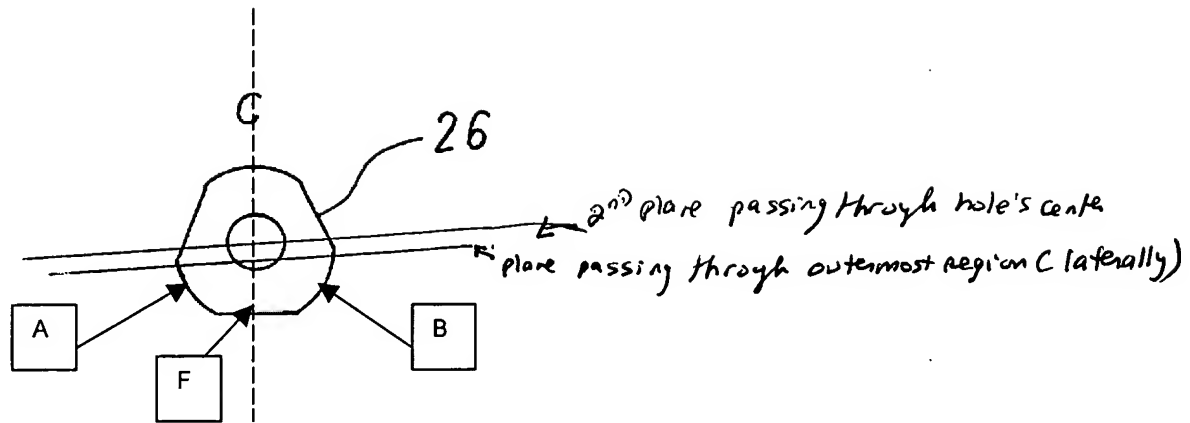
The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 16, 28 and 29 are rejected under 35 U.S.C. 102(b) as being anticipated by DE 4244316.

DE 4244316 teaches a cutting insert (14) having a planar top side, a bottom side and a peripheral clearance surface extending between the top and bottom sides, and a through-hole for receiving a mounting screw. DE 4244316 teaches the recess of the tool holder matching the shape of the cutting insert (see abstract). DE 4244316 also teaches in figure 6c an insert having first and second spaced apart convexly arch-shaped cutting edges (A and B) spaced apart by a front edge (F) of the insert and disposed respectively on opposite sides of a symmetry plane which intersects the front edge (F) and passes through a center line of the hole (see figure 6c). The first and second cutting edges define a laterally outermost region of the insert spaced farthest from the plane and each laterally outermost region is spaced from a second plane (p2) passing through the hole's center perpendicularly to the symmetry plane in a direction toward the front edge (see figure below). Furthermore, DE 4244316 teaches the bottom side of the insert (14) including stabilizing structure (13 & 19: see figure 3 and abstract) arranged for preventing angular displacement of the insert about an axis of the hole.



### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 24-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over DE 4244316, in view of Rydberg et al. (U.S. Patent No. 6,146,060).

DE 4244316 teaches a cutting insert having a stabilizing structure (13 & 19) as set forth in the above rejection.

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However, DE 4244316 fails to teach the stabilizing structure comprising grooves projecting from the bottom side and intersecting one another.

Rydberg et al. teaches coupling between the bottom surface of a cutting head (12) and holder, with grooves that are perpendicular to one another and intersect one another as well as the center axis of the hole (i.e. forming a stabilizing structure) (see figures 2A and 2C).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to substitute the coupling surfaces between the insert and holder of DE 4244316's invention such that it has grooves that are perpendicular to one another as well as intersect each other as taught by arm taught by Rydberg et al., for the purpose of having a tool and an insert that are easy to assembly as well as be continuously rigid and have good precision ('060, Col. 1, lines 45-51).

4. Claim 30 is rejected under 35 U.S.C. 102(b) as being anticipated by DE 4244316 in view of Larsson (U.S. 5,931,613).

DE 4244316 teaches a cutting insert (14) having a planar top side, a bottom side and a peripheral clearance surface extending between the top and bottom sides, and a through-hole for receiving a mounting screw. DE 4244316 also the insert having first and second spaced apart convexly arch-shaped cutting edges as set forth in the above rejection.

However, DE 4244316 fails to teach the bottom side of the insert having a stabilizing structure for preventing angular displacement of the insert about an axis of the hole.

Larsson teaches a cutting insert (1A) having a stabilizing structure on its bottom side ('613, Figure 9) comprising first and second linear recesses (3A & 3A') formed on the bottom side and extending perpendicularly to one another, lying on respective first and second axes that intersect one another substantially at the center of the hole ('613, Figure 9). Larsson also teaches the first and second recesses (3A, 3A') comprising two sections disposed on opposite sides of the hole and the curved side edges (16) disposed on opposite sides of the first axis. Furthermore, Larsson teaches a pair of first and second countersinks disposed on opposite sides of the first and second section of the first recess and disposed adjacent the first and second cutting edges, respectively. Each first and second countersinks have width which increases in a direction toward the respective cutting edge.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to substitute the coupling surfaces between the insert and holder of DE 4244316's invention such that it has a stabilizing structure on its bottom end as taught by Larsson, for the purpose of having a clamping system which can in an optimal manner absorb both radial and axial cutting forces ('613, Col. 2, lines 3-14).

5. Claims 32 is rejected under 35 U.S.C. 103(a) as being anticipated by Werner et al. (U.S. Patent No. 5,536,119), in view of Rydberg et al. (U.S. Patent No. 6,146,060).

Werner et al. teaches a cutting insert comprising a top side, a bottom side, a peripheral clearance surface extending between the top and bottom sides and a hole extending from the top side to the bottom side for receiving a fastener ('119, Figure 1). Werner et al. also teaches a recess (13) formed one end of the insert ('119, Figure 2) such that the top side has a first and second spaced apart convexly arch-shaped cutting edges. The first and second cutting edges are spaced apart by a recess (13) which the Examiner defining as Front edge and converge toward one another in a direction away from the front edge wherein the front edge is linear and intersects the first and second cutting edges tangentially thereto.

However Werner et al. fails to teach the stabilizing structure comprising grooves projecting from the bottom side and intersecting one another.

Rydberg et al. teaches coupling between the bottom surface of a cutting head (12) and holder, with grooves that are perpendicular to one another and intersect one another as well as the center axis of the hole (i.e. forming a stabilizing structure) (see figures 2A and 2C).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to substitute the coupling surfaces between the insert and holder of DE 4244316's invention such that it has grooves that are perpendicular to



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one another as well as intersect each other as taught by arm taught by Rydberg et al., for the purpose of having a tool and an insert that are easy to assembly as well as be continuously rigid and have good precision ('060, Col. 1, lines 45-51).

***Allowable Subject Matter***

Claims 1-15 are allowed.

The following is an examiner's statement of reasons for allowance: Schlemmer et al. (U.S. Pub. No. 2002/0094245) is the closest art of record. There is no suggestion in Schlemmer et al.'s teaching to provide the tool body with an insert that has two spaced-apart convexly arched cutting edges without destroying the intent of Schlemmer et al.'s invention.

Claims 31 and 22 are allowed.

The following is an examiner's statement of reasons for allowance: Storch (U.S. Patent No. 5,632,576) is the closest art of record. There is no suggestion in Storch's teaching to provide the convexly curved cutting edges with a plurality of edges having different respective radii of curvature.

Claims 17-21 and 23 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sara Addisu at (571) 272-6082. The examiner can normally be reached on 8:30 am - 5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Boyer Ashley can be reached on (571) 272-4502. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

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Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Sara Addisu  
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S.A.

9/26/03

  
BOYER D. ASHLEY  
PRIMARY EXAMINER